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Building and Sustaining Partnership Between Line and I/S Managers

John C. Henderson

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Management in the 1990s

Massachusetts Institute of Technology
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Sloan School of Management
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Management in the 1990s

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1.0 INTRODUCTION

In today's competitive world, the effective use of information technology (I/T) as an element of a competitive strategy is critical. Cash and Konsynski (1985), Rockart and Scott Morton (1984), and others have cited numerous examples of how organizations have used information technology to build and sustain new relationships with suppliers or customers and, as a result, have achieved a significant competitive advantage. A common theme in these examples is the use of information technology to improve the coordination of the activities across organizations that are critical to developing and delivering products and services to a market. However, it is often noted that these organizations did not gain their advantage by virtue of the information technology in and of itself. Johnston and Lawrence (1988) point out that Foremost McKesson radically changed both its internal operations and its working relationships with customers in its efforts to build and sustain a competitive advantage over large, integrated pharmaceutical companies. Rockart and Short (1989) discuss the need for effective internal integration across value-added functions as a critical aspect of effective execution of interorganizational information systems. Konsynski and Warbelow (1989) argue that the use of information technology linkages between organizations will only "speed up the mess" if a fundamental restructuring of the nature of work in organizations is not achieved.

To the extent that these observations are correct, senior managers must now effectively integrate the management of information technology into every aspect of their organizations (Henderson and Venkatraman, 1989). One approach to achieve this level of integration has been to decentralize the I/S organization, placing the responsibility for management of the I/S function directly under the general manager of strategic business units. And yet this decentralization in itself does not remove the need for effective coordination of actions across the information systems community. In fact, such decentralization may increase the cost of coordination for critical infrastructure components such as telecommunications or data resource management (Keen, 1986).

Further, while there are many examples of how investments in technology have yielded significant competitive advantage, there are also many examples where such investments have resulted in no measurable impact (Curley and Henderson, 1989). In many cases, this failure appears to stem not from an inappropriate vision but from the inability of the organization to effectively integrate the use and the management of the technology into the mainstream of the firm. One key element of a solution to this management challenge suggested by Rockart and Short (1989) is the building of a partnership between I/S organizations and line managers. They argue that while there is a fundamental role for line managers in providing leadership and commitment to the use of information technology, there still remains the requirement to effectively manage the information technology infrastructure, to appropriately understand an emerging and dynamic technology marketplace, and to change the nature of work practice associated with the operations, development and implementation of information systems.

This paper explores the concept of partnership and the building of partnership as a management strategy. Regardless of the level of decentralization of the I/S function, there still remains a critical need to build an effective working relationship between line managers and information systems managers and specialists. While some may envision the day in which information systems specialists are not required, trends in technology and the increasing complexity of the technology infrastructure (such as telecommunications, database systems and large transaction/application systems) suggest that this functional area of the business will not soon disappear. Rather, this paper takes the perspective that information systems must be recognized as a critical function in the organization. As such, senior management must create and enact effective working relationships among the managers who have various functional expertise in order to achieve maximum value from their I/T investments.

In many ways the concept of partnership in the management of I/T is not new. Strategies for managing the development and operations of information technology are often grounded in participatory decision making/problem solving theory (Mumford, 1981). Kling (1980) argues that a social-political perspective provides a powerful paradigm for understanding the effective management of information technology in organizations. Similarly, Markus and Pfeffer (1983) build on notions of power and influence as a theoretical perspective in examining mechanisms for effectively managing I/T.

In a similar vein, corporate strategy researchers have focused on the concept of partnership as a general management strategy. While their focus is often external, i.e., understanding the working relationships across organizational boundaries, the term "partnership" is used to describe a working relationship that reflects a long term commitment, a sense of mutual cooperation, shared risk and benefits, and other aspects that are consistent with concepts and theories of participatory decision making (Wilson, 1989).

In this paper we will present the results of research that provide a basis for developing a descriptive model of partnership. Executive interviews that focus both on management relationships with external organizations as well as relationships between I/S executives and line executives provide the data to develop this model.

2.0 THE PARTNERSHIP CONCEPT

It is important to understand the difference between a partnership and other notions of exchange relationships. Gardner and Cooper (1988) differentiate between a "transactional style of relationship" and a "partnership style of relationship."

In essence, the transaction style relationship is an arm's length exchange in which the "rules of the game" are well specified. Further, in a transactional style relationship, if one member fails to deliver on his/her commitment, litigation is most often the form of redress. In contrast, a partnership style relationship requires both parties to share investment and risk, and to participate in an exchange that involves many independent transactions that span an extensive length of time. Table 1 provides a

Characteristics of Partnerships

- Stability of the Relationship
  - Sustained over time (no explicit end point)
  - Self-maximizing behavior is not optimal
  - Opportunistic behavior controlled through processes rather than contracts
  - Significant contract ambiguity
- Interdependence of the Relationship
  - Stream of exchanges that are highly interdependent
  - Joint acceptance of costs/burdens/risks
- Flexibility of the Relationship
  - Willingness to invest in relationship
  - Mechanism for adapting to uncertain events
- Mechanisms of the Process
  - Influence relationship
  - Operational exchange of key information
  - Economic relationship
  - Social/political networks

Table 1

summary of some major characteristics of partnerships that are often used to differentiate them from a transaction style of relationship.

For example, the concept of value-added partnership, put forth by Johnston and Lawrence (1988), is characterized as "a set of independent companies that work closely together to manage the flow of goods and services along the entire value-added chain." It is interesting to note that they argue that while the concept of value-added partnership is not new and that it is not dependent on technology, information technology can greatly increase the ease of communication and the ability to share information, thereby enabling partnerships to emerge as new major competitive factors in the marketplace today. From our perspective, the opportunity also carries the requirement for more effective partnerships between line and I/T managers.

The research presented here builds on the previous work on partnership style relationships by exploring two fundamental dimensions:

Partnership in Action (PIA) - Partnership in Action is defined as *the ability of members of the partnership to effectively influence key policies and decisions that affect the performance of the partnership.* This dimension of partnership looks at the key factors which create the day-to-day working relationship.

Partnership in Context (PIC) - Partnership in Context is defined as *the degree to which members of the partnership believe that the partnership will be sustained over time.* This dimension of partnership looks at the key factors which establish the participant's belief in the longevity, stability, and interdependence of the relationship.

In this research, we develop a model of partnership based on structured interviews with executives. We focus both on relationships between companies and on the internal relationship between the line organizations and the I/S function. While there are limitations in adapting an external market model to characterize an internal organizational working relationship, this approach offers one means to explore the concept of partnership between line managers and I/S.

3.0 A MODEL OF PARTNERSHIP

3.1 RESEARCH METHOD

In developing the model of partnership, a series of interviews were conducted with senior line executives currently managing partnership style relationships with customers or suppliers as well as with executives involved in internal I/S-line relationships. A total of 23 interviews were conducted.

Each interview followed a structured format. The executives were asked to describe actual exchange relationships with customers or suppliers that they considered to be examples (critical incidents) of effective partnership relationships. Then, three general questions based on the two dimensions discussed in Section 2 were posed:

1. What are the factors or elements of this relationship that contribute to its effective execution on a day-to-day, week-to-week basis (PIA)?
2. What are the factors or elements of this relationship that lead you to believe that this relationship will be sustained over time (PIC)?
3. What are the actions that you took or are taking to build or sustain this working relationship?

The order of questions 1 and 2 were randomized across subjects. As might be expected, the response to these questions often overlapped. That is, in discussion of partnership operations, executives would often begin to talk about why they believed that this was going to be a partnership that had a long-term effect. The interviewer made no attempt to constrain these comments. Each interview lasted approximately one hour.

The same interview structure was used for managers that were focusing on the internal I/S-line relationship. In this context, the anchoring concept involved a description of the current working relationship between the I/S function and the line function. The same three general questions were addressed.

In addition to individual interviews, the partnership model was presented in two focus group sessions with executive teams. These sessions sought to have the model critically examined to surface possible enhancements and to provide further examples.

In the following section we will described six determinants of partnership (three in each dimension) that emerged from these interviews. In each case we will describe the determinant from the external partnership perspective. In Section 4 we will discuss the implications for the line-I/S partnership which follow from this research as well as specific actions to build and sustain partnership relationships. Figure 1 illustrates the six determinants.

3.2 PARTNERSHIP IN CONTEXT

3.2.1 PARTNERSHIP IN CONTEXT: MUTUAL BENEFITS

A common theme emerging in every interview was the need for mutual benefit among members of the partnership. One executive defined partnership as

> **"a working relationship in which members of the partnership receive benefits that could not be achieved through independent action."**

The executives argued that it was not sufficient to have a general feeling that the partnership added value. Rather, effective partnerships require explicit attention to articulating and agreeing upon the benefits accrued by each member of the partnership.

There were several types of benefits that surfaced repeatedly through the interview and focus group sessions. The primary view of benefits related to a *financial return* directly attributable to actions taken by the partnership. In general, these financial returns were related to either increased revenue through market access or to reduced cost by increasing the efficiency of transactions between members of the partnership. For example, the use of EDI to better coordinate the actions of a firm and supplier was often cited as a mechanism by which costs could be reduced or new markets accessed.

A second benefit focused on *process or product innovations*. A consistent theme found across

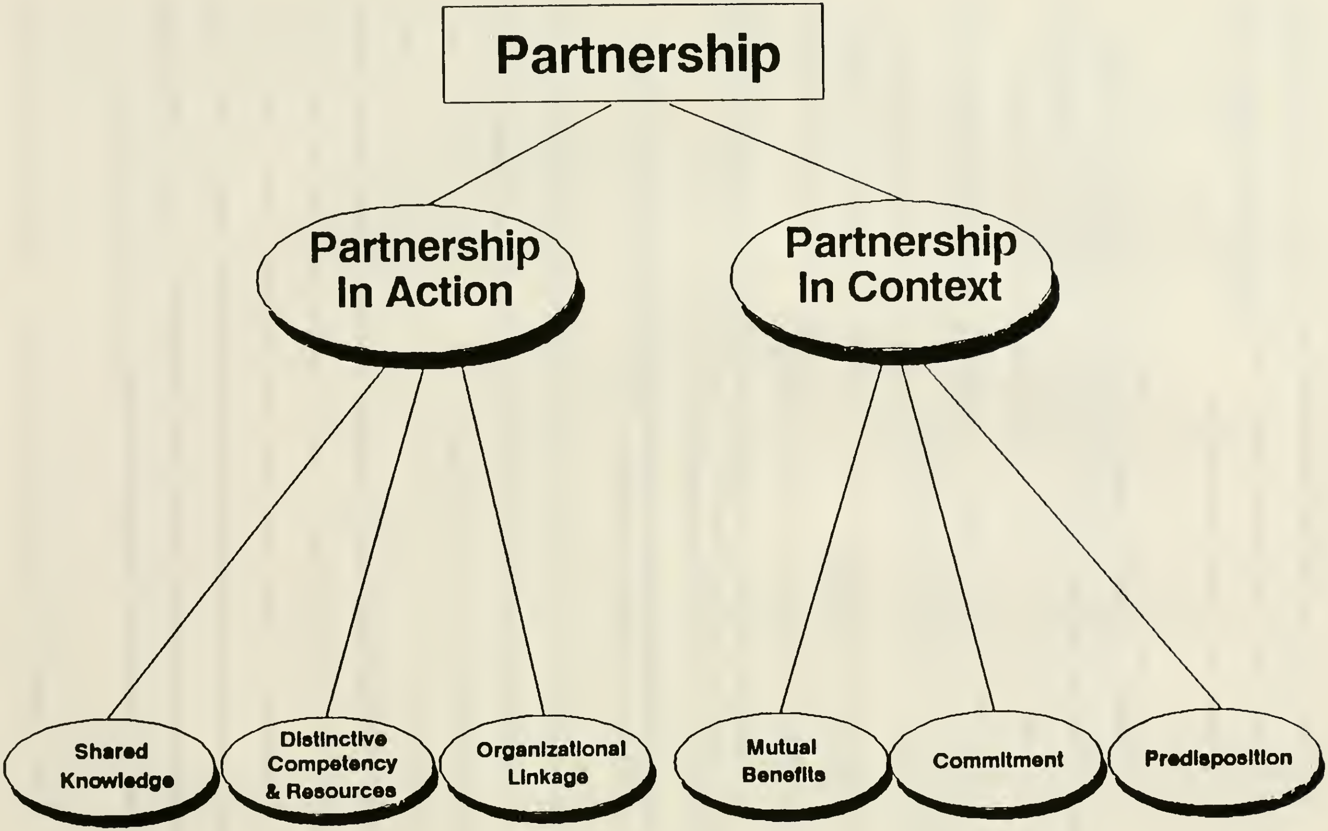
Partnership
Partnership In Action
Partnership In Context
Shared Knowledge
Distinctive Competency & Resources
Organizational Linkage
Mutual Benefits
Commitment
Predisposition

Figure 1

the interviews was the ability of the partnership to pool expertise, market knowledge, and process knowledge in a way that enabled the partnership to innovate, and, ultimately translate these innovations into products or services.

The third type of benefit related to *risk sharing*. The executives argued that partnerships enable each of the firms to pool risk and therefore result in an increased willingness to take risk.

Finally, a fourth category dealt with the ability of the partnership to *adapt* to market or unforseen changes. This category could be viewed as an aspect of risk management. That is, the partnership manages risk collectively by increasing the likelihood that they will be able to react effectively to environmental uncertainty. This issue appeared to be quite significant. Many of the executives described the benefit of the partnership as its ability to coordinate action as a competitive unit in response to market uncertainty or competitor response. For example, one executive discussed how his firm's partnership with a distributor enabled them to more effectively bring a product response into their distribution channels, thereby responding more quickly to a competitor's product introduction.

Our interviewees also stressed the converse point that if the benefit stream is uncertain, the partnership is at risk and the future of the partnership is problematic. The partnership model shown in Figure 1 incorporates "mutual benefits" as a determinant of PIC. One executive's statement sums it up:

> **"Why do I think It will last? Because we all have something to gain."**

3.2.2 PARTNERSHIP IN CONTEXT: COMMITMENT

Each of the executives discussed at length that commitment among the members of the partnership was a major contributor to their belief that the relationship would be sustained. Three major indicators of commitment were identified: shared goals, incentive systems, and contracts.

Shared goals was raised by every executive as a major indicator of a commitment to a partnership. The executives stated that common goal structures provided an ongoing motivation that could sustain the partnership when expected benefit flows were not realized. Further, shared goals, they argued, provided a common ground upon which to negotiate solutions in areas where goals conflicted. This seemed to be particularly critical when members of a partnership included potential competitors.

Closely related to the notion of shared goals was that of incentive systems within the organization. In general the executives argued that the existence of an appropriate incentive system that served to reinforce the goal structure of the partnership, was a significant indicator of commitment. For example, one executive described at length a partnership that required a focus on quality rather than volume as a measure of effectiveness of the distribution system. A major goal of this partnership was that all materials would be delivered undamaged. The producing organization had to restructure the underlying incentive and compensation system in each stage of its distribution system to ensure that quality would be rewarded and recognized throughout the organization. In essence, the executives argued that the existence of an appropriately designed and visible incentive system aligned with the goal structure of the partnership reflected a depth of commitment to the working relationship itself, and hence, increased the belief that the partnership would be sustained.

Finally, the executives said that contracts played an important role in a partnership. However, they added that the contract provided only a general sense of the responsibilities of the partnership. Each executive argued that, as an enforcement mechanism, contracts were often ineffective. They attributed this to the fact that the working relationship was complex and ambiguous and could not be defined in terms of explicit conditions. However, they did note that the existence of the contract in itself reflected a willingness of the members to commit to the working relationship. Several of the executives pointed out that while the contract became increasingly less specific over time, it provided an important symbolic commitment.

3.2.3 PARTNERSHIP IN CONTEXT: PREDISPOSITION

The third major determinant of PIC is predisposition: an existing predilection in favor of the partnership. Two conditions that interviewees described as indicating predisposition were trust and existing attitudes/assumptions.

Every executive emphasized that his or her belief in the ability to sustain the partnership ultimately translated into a sense of trust among members of the partnership. When asked to expand upon their concept of trust, the two common enablers were 1) the existence of an explicit track record among members of the partnership, and 2) personal relationships. They felt an existing track record indicated the extent to which members of the partnership have made commitments and delivered on them. The executives also felt that building trust required members of the partnerships to surface their failures, as well as to highlight those commitments achieved. In this sense, the executives stated that a trust relationship was built by creating an open communication between members of the partnership.

Similarly, personal relationships were also a major element of trust. Each executive emphasized the need to develop personal contact at all levels of the organization. As one executive said,

> **"You must have the ability to bypass the organization and go directly to someone that you know will listen and act."**

A second condition indicating predisposition centered on the existing attitudes and assumptions of members of the partnership. Many of the executives said that the attitudes of management towards cooperative relationships played a major part in their ability to sustain partnerships over time. Several stated that these attitudes could be traced to underlying assumptions about the nature of competition in their industry. That is, as executives began to believe that strategic partnerships were going to be a major element of competitive strategy, their attitudes towards the benefits of cooperative relationships improved.

3.3 PARTNERSHIP IN ACTION

The second major dimension discussed in the interviews focused on the determinants of the effective execution of a partnership, i.e., Partnership In Action (PIA). In the next section we will discuss the three determinants of PIA.

3.3.1 PARTNERSHIP IN ACTION: SHARED KNOWLEDGE

One major determinant of PIA was the extent of shared knowledge among members of the partnership. For example, one executive described a partnership relationship with a Japanese organization. The Japanese management team developed job descriptions for key roles in 15 minute segments for 24 hours a day, seven days a week. They argued that an in-depth understanding of key roles was vital to the effective working relationship of the partnership. A second example, also involving a partnership negotiation with a Japanese organization, had American managers sending workers to Japan for 4 to 6 weeks in order to help them better understand the culture of Japanese organizations. This type of example was used by each executive to illustrate the criticality of shared knowledge of the environment, culture, and work processes, as a basic foundation for effectively operating in a partnership relationship. As one executive stated,

> **"If we don't understand how they work, we cannot effectively influence them in areas that are critical."**

3.3.2 PARTNERSHIP IN ACTION: MUTUAL DEPENDENCY ON DISTINCTIVE COMPETENCIES AND RESOURCES

It is not surprising that resource dependency was highlighted by every executive that discussed Partnership In Action. Many of the executives commented that the difficulty in establishing partnership relationships was coming to grips with managing an environment in which resource dependencies in critical parts of the business existed. One manager argued,

> **"Just-in-time inventory management is absolutely critical to our manufacturing strategy. And yet, we depend on our relationship with our carrier to make our just-in-time inventory system work. They have the trucks, the distribution system and increasingly, the logistics management skills. It took our company a long time to become comfortable with an environment in which there was such a critical dependency."**

It was interesting to note that the executives included market knowledge, management skills, and experience along with product attributes as key types of resources.

This low substitutability of the assets owned by members of the partnership was highlighted by many examples. A typical one was described as,

> **"Although I could replace the revenue stream provided by my customer (i.e. replace the monetary asset), I could never replace their knowledge of how to use my product in their organization. They have customized their usage system in their organization in such a way that my margins are higher with that customer than in any other part of my business. If I lose that business partner I could replace the revenue stream but I could never replace the margins."**

Of course, the notion of asset specificity would argue that customizing a usage system would create a customer lock-in structure, thereby shifting power to the supplier. In this case, however, the executive argued that customizing of the usage system translated directly into reduced cost to the supplier and thus generated a mutual dependency rather than an asymmetric dependency. If the partnership failed, each member of the partnership lost. As a result, each member's influence over key policies and decisions increased.

3.3.3 PARTNERSHIP IN ACTION: ORGANIZATIONAL LINKAGE

A final determinant highlighted by executives reflected a need for organizational process linkage. Three types of linkage were identified: physical process integration, information integration, and social networks.

Process integration reflected the design of business processes in a manner that intertwined the actions and activities of organizations. Thus, executives described the use of facilities of their partner to store inventories or use of their partner's human resources to establish and manage quality in a business process that crossed organizational boundaries. Joint planning processes were often used to illustrate a successful partnership.

A second form of integration emphasized information integration. Many examples were highlighted in which the exchange of information enabled the organizations to better plan or execute their own internal business processes. Of course EDI examples were most prevalent. However, the need to exchange monitoring information was also highlighted. One executive stated,

> **"You know they're serious about partnership when they're willing to share real costs."**

Thus, we see an extended notion of electronic integration. That is, information exchange goes beyond transaction automation into processes integration through better and more effective information sharing.

Finally, a major mechanism for creating organizational linkages again emphasized personal relationships. Each of the executives highlighted the criticality of establishing personal relationships at all levels of the organization in order to make partnerships effective. It was not sufficient to have a personal relationship among senior managers. Rather, middle managers must establish relationships, and relationships must be reflected in the actual business processes that were critical to the partnership. As one executive said,

> **"It is often the personal relationships that are built between organizations that enable you to manage across the rough spots."**

4.0 IMPLICATIONS

As discussed in Section 3, we conducted interviews with both general line executives and with executives focussing on the internal line-I/S partnership. In this section we will describe how the dimensions of the partnership model apply to the line-I/S relationship.

4.1 LINE AND I/S PARTNERSHIP IN CONTEXT

4.1.1 LINE AND I/S PARTNERSHIP IN CONTEXT: MUTUAL BENEFITS

Executives that focused on internal line-I/S partnership raised the concept of benefits but appeared to have difficulty in articulating a notion of *mutual* benefit. To many the internal partnership was viewed as having a single type of benefit: achieving the goals or objectives of the firm. The I/S organization was viewed strictly as a service organization providing support and resources to line management in their pursuit of their business objectives. However, as the executives discussed this concept in the context of effective working relationships, the concept of a mutual benefit between I/S and lines emerged. The interviews surfaced what appeared to be three major categories of shared benefits from an internal perspective: financial contribution, operations efficiency, and quality of work life.

The ability to *explicitly* articulate the *financial contribution* made by the I/S function to the achievement of business objectives was consistently raised as an important requirement to sustain effective I/S-line partnerships. Executives stated that the measures, as with many approaches to defining proportional contributions, were difficult to negotiate but when established helped to create an environment where I/S could be viewed as an equal partner.

A second element emphasized operations efficiency for both the line and the I/S organization. In this view, effective partnerships enabled the redesign of work processes that relate to the development, implementation, and maintenance of a wide range of I/S products and services. The emphasis was on opportunities to reduce head count, to improve quality and timeliness of system development projects, and to reduce redundancy in various work specialties.

Finally, a third component related to quality of work life. Corporate executives argued that an improved working relationship as measured by indicators such as job satisfaction, was an important complement to the financial perspective. For example, each of the executives identified the ability to manage conflict as a major benefit stemming from a partnership relationship. One stated that

> **"conflicts often stemmed from different knowledge bases/experiences and working relationships found across functions of the business rather than a fundamental conflict in goals between the I/S organization and the line."**

The ability to build a partnership in which goal conflict could be effectively and openly managed provided a major benefit to the organization in terms of both efficiency and the opportunity to challenge each other's assumptions.

4.1.2 LINE AND I/S PARTNERSHIP IN CONTEXT: COMMITMENT

The concept of commitment as a major element of PIC surfaced here as well. However, the executives believed that gaining the commitment from people in different functional or business divisions was a significant challenge. The same three major indicators of commitment were described: shared goals, incentive systems, and contracts.

Shared goals provided a means to establish an explicit commitment among members in a partnership relationship. Although the I/S function has incentive systems, executives pointed out that they differed from those in the line organization. The traditional incentive for the I/S function reflected efficient operations of the technology rather than efficient execution of a business process. In addition, ineffective pricing schemes for I/S services could lead to high demand for services from line organizations which might not be the high payoff areas for the company. I/S resources, therefore, may not be effectively channeled to line organizations.

In the area of contracts, several executives pointed to their use of formal service-level contracts between I/S and line organizations. In quite a similar fashion to the externally-oriented interviews, they described how the nature of a partnership could not be specified in terms of explicit contingencies. As such, the commitment reflected by service-level contracts was often symbolic of a deeper working relationship. One executive expanded on this point by illustrating how easy it was to create a service-level contract that was "safe". He argued,

> **"the real importance of such contracts is to ensure everyone is *committed* to an effective working relationship."**

4.1.3 LINE AND I/S PARTNERSHIP IN CONTEXT: PREDISPOSITION

Issues of trust and existing attitudes surfaced as major elements in sustaining an effective partnership. Several of the executives explicitly attributed the lack of trust between I/S and line managers to the inability to develop a workable partnership. One executive described their strategy of selecting managers for both the line and I/S organizations:

> **"we choose people who have an existing positive personal relationship."**

This strategy was taken intentionally to try to have an impact on the lack of trust between I/S and line organizations.

The issue of existing assumptions was highlighted specifically with regard to "attitudes towards technology." The executives argued that positive attitudes towards technology, beliefs in the strategic role of technology, and assumptions about the use of technology and technology trends in their industry, were important indicators of a positive predisposition towards building a partnership relationship between I/S and the line.

4.2 LINE AND I/S PARTNERSHIP IN ACTION

4.2.1 LINE AND I/S PARTNERSHIP IN ACTION: SHARED KNOWLEDGE

As in external partnerships, the requirement for shared knowledge was consistently highlighted as a key to effective working relationships between line and I/S organizations. Each of the executives underlined the need for effective education and work experience from both a technology and a business perspective. One executive said,

> **"What we must have is mutual understanding of both technology and business practices if we're going to be able to jointly make key decisions."**

That is, this executive rejected the notion that an effective partnership could be achieved via translation. It was not sufficient to translate the language of technology into business terms (or visa versa). Rather, each partner had to develop an appreciation and deep understanding of the other's task environment.

4.2.2 LINE AND I/S PARTNERSHIPS IN ACTION: MUTUAL DEPENDENCY ON DISTINCTIVE COMPETENCIES AND RESOURCES

Many examples were supplied by the executives to reflect asset dependencies: skilled resources, available head count, and control over physical assets such as equipment. However, perhaps of most interest were discussions that focused on the need for the I/S-line partnership to negotiate ownership of assets.

The prime example of this centered around the effective management of data in organizations. In several instances, executives argued that data could not be managed if it was viewed as being owned exclusively by either I/S or line. Rather, they felt that both line organizations and I/S organizations brought to bear critical skills, experience, and physical assets that were necessary to manage data across the corporation. Ownership of data standards and accountability for integrity of data at the source of generation were often used to illustrate the need for ownership of the data from a line perspective.

Yet, the ability to manage large databases in a high performance environment required skills and specialized assets that often were best managed by the I/S organization. As one executive stated,

> **"We've tried it centralized, we've tried it decentralized. I believe the only solution is to recognize that both line and I/S have unique skills to manage data."**

The key issue, he asserted, was the need to negotiate and clearly establish roles and responsibilities.

4.2.3 LINE AND I/S PARTNERSHIP IN ACTION: ORGANIZATIONAL LINKAGE

The requirements to intertwine organizational processes, to exchange information, and to build personal relationships were also highlighted in the discussions of internal processes. One I/S executive stated that,

> **"My measure of partnership is defined as whether or not, when a key decision is made, one of my people is in the room."**

In that sense, he was arguing that for key management processes, i.e., planning and control, the I/S organization must be included as a member of the decision-making process. Of course, this process of organizational linkage needs to be bi-directional. Line executives pointed out the desire to have more involvement in decisions made by I/S concerning technology standards and technology direction. Similar emphasis was placed on the role of information exchange, i.e., providing accurate price/cost information of I/S services and the need for good personal working relationships.

4.3 ACTIONS TO BUILD AND SUSTAIN PARTNERSHIPS

As part of the interview process, each executive was asked to illustrate specific actions taken to build or sustain the partnership. Actions were also generated as part of the general discussion surrounding questions 1 and 2. To be defined as an action, the executive had to describe a specific set of activities taken with the express purpose of building or sustaining a partnership. Table 2 provides a summary of the action items generated during the interview process.

4.3.1 EDUCATION

Specific action taken to provide education for members of the partnership was identified by every interviewee. As illustrated in Table 2, education reflected three basic concepts. First, there was a

Actions to Build and Sustain Partnership

- Education
  - Skills Transfer & Training
  - General Education
  - Social & Cultural
- Joint Planning
  - On-Going, Iterative
  - Negotiate Mutual Benefits
  - Create Common Goal Set
  - Education
- Measurement & Control
  - Jointly Designed & Implemented
  - Effective Benchmarking
  - Provision of Operational and Performance Data
- Effective Use of Teams
  - Coordinate Diverse Knowledge
  - Create Social Networks
  - Create Stability
- Multilevel Human Resource Strategy
  - Actions Address All Levels
  - Select & Assign Key Personnel
- Technology
  - Asset to Partnership
  - Mechanism for Interorganizational Exchange

Table 2

focus on skills transfer or training. That is, each of the interviewees identified the need for members of the partnership to be trained in those task-related activities in which high interdependency existed. The development of joint training programs often taught jointly by members of the partnership was a common action.

The second major educational concept was the need for general education that spanned the partnership. That is, the interviewees believed that it was necessary for individuals to have an understanding of the key concepts and skills held by other members of the partnership. One example often mentioned was the need for the information systems expert to be given general business education. And yet, in every instance those interviewed from both the I/S and line organizations argued that it was also necessary for line managers to be educated in the essential concepts and critical issues relating to the technology.

Finally, a third element of education related to social or cultural education. One interviewee discussed in detail their program for sending key workers to Japan in order for them to better understand the Japanese culture. They argued,

> **"We must have an understanding of what it means to work for Japanese organizations if we are to be able to effectively participate in the partnership."**

In many instances, cross training or short-term assignments were used as a means to develop cultural appreciation of the partner's work environment. One executive said

"I make sure my people have a personal work experience as a means to understand our key partners."

As suggested above, the executives believed that shared knowledge was a critical element in the ability to effectively participate in and influence policies and decisions that affect the partnership. In every instance, the executives could point to specific training/educational programs and budgetary commitment as an indication that this action was being carried out. In many cases the executives felt that a secondary impact of education was predisposition. However, they quickly conceded that such education programs were long-term strategies for affecting existing attitudes.

4.3.2 JOINT. PLANNING

The second major activity set emphasized by the executives involved joint planning. By joint planning, the executives described far more than exchange of planning-related information, i.e., a manufacturer providing a distributor with a production schedule. Rather, they discussed an ongoing, iterative planning process that reflected both strategic thinking by the partnership as well as the translation of that strategy into action plans.

The executives identified at least three major impacts of the planning process. First, planning was a primary mechanism to negotiate and agree upon areas of mutual benefits for the partnership. Secondly, planning was a primary mechanism for creating a common goal set among members of the partnership. Finally, many of the executives viewed the process of planning (e.g., including assumption surfacing and testing) as a form of education. As such it had a major impact on the ability to create a shared knowledge base among members of the partnership. It is interesting to note that the executives did not indicate that the planning process alone was an effective means to influence the predisposition of the members of the partnership. That is, they felt that the planning process in and of itself did not really create trust. Similarly, they did not believe planning was an effective means to address issues of attitude, e.g., attitudes towards technology.

The mechanisms used to implement joint planning processes varied. In most cases the planning processes reflected a multilevel commitment. In addition to those people directly involved with the process, a task force group or committee of senior-level managers was formed to act as sponsors of the planning process and, ultimately, to make final judgments regarding appropriate goals and commitments to benefits. This task force also provided the mechanism to ensure top management commitment.

Another mechanism involved the participation of key members in the organization. In almost every case the executives emphasized a decrease in reliance on professional planners or staff for creating and implementing plans. Rather, they saw the planning process as an active, dynamic process, that involved the key individuals who would be working together. In some cases the executives described a planning process that involved the exchange of personnel or co-location of key members of the organization.

Planning became an ongoing process in which the organizations both solved problems of immediate concern and positioned themselves to deal with long-term organizational change. In this sense, the joint planning process became one of the key organizational processes that reflected organizational linkage. That is, the planning and, as we will discuss in the next section, the monitoring processes of the partnership became intertwined.

4.3.3 MEASUREMENT AND CONTROL

A third major action taken by the organizations centered on activities to identify and create appropriate measures used by the organizations to monitor activities and to judge performance. In each case the ability of the partnership to design and implement the measurement and control systems was viewed as a key action necessary to build and sustain the partnerships. This activity had wide impact on the partnership setting. From a Partnership In Action perspective, this activity reflected a key organizational linkage. The organizations, through the design of a joint control system, provided a mechanism for information integration.

The actions taken to develop a monitoring process seem to emphasize three key concepts. First, the executives focused on the notion of designing compatible incentive systems that reflected joint commitment. An I/S-line partnership example similar to the earlier discussion on quality involved the use of performance measures that reflected *quality of task completed* rather than transaction volume.

A second major action was to focus on the need for effective benchmarking at the initial stages of partnership development. In several cases, both in external relationships and I/S-line partnerships, the criticality of benchmarking as an activity required to build effective partnerships was discussed. One executive said,

> **"We all agreed on benefits, but as we sat in the room, we each had very different concepts of current performance. Had we not benchmarked the key business processes, we could have implemented our solutions and, in the minds of some, the benefits would not have appeared."**

This focus on benchmarking is a key element in many strategies for implementing quality control and continuous improvement processes. It is, in effect, an attempt to level the playing field among members of the partnership and to ground the measures used by the partnership in the actual experiences of the organization.

Finally, there was a major emphasis on the actual design and implementation of the information systems necessary to provide operations and performance data. In many cases, the design of these systems required substantial investment by the partnership. And yet the executives argued that these information systems were critical to building and sustaining the partnership. For example, many executives noted that the trust relationship was directly related to track record:

> **"If the organization does not have an acceptable information system that monitors performance and provides track records on commitment and activities of the partnership, the trust relationship will always be in question."**

The cost of information is a major element of any organization's control strategy. As such, investment in I/T enabled innovation in control processes as well as business processes.

The ability to define and implement an acceptable measurement and control system was a major strategy used by the organization to affect predisposition, mutual benefits, and commitment. The executives argued that the ability to share data concerning critical processes affecting the partnership, established the foundation for believing that the partnership would sustain. Further, the measurement systems served as key linkage mechanisms, in that an EDI linkage also enabled the basic information flow for developing a joint measurement and control system.

4.3.4 EFFECTIVE USE OF TEAMS

The fourth major area discussed by the executives was the effective use of cross-functional teams. The use of cross-functional teams was justified on three bases. First, executives argued that the ability to effectively intertwine and create linkages between the organizations required multiple disciplines and extensive knowledge of the organizational processes. As such, the partnership had to have access to individuals with varied knowledge such as manufacturing, distribution, engineering, or sales in order to deal with problems, to effectively plan and to make day-to-day decisions relating to the performance of the partnership. Cross-functional teams provide a means to coordinate this diverse knowledge.

The second major justification for the use of cross-functional teams related to social networks. From this perspective, every executive discussed the criticality of personal relationships in the effective operations of a partnership. These social networks not only had to span across functional areas, but they had to also span hierarchically in the firm. They provided the ability to quickly network to those members of the organization who had to participate in or support the actions taken by the partnership. For example, one manager described a major crisis that involved an unexpected price increase which had a fundamental impact on the benefit flow for the partnership:

> **"If we did not have a team that could effectively network across both organizations to quickly involve key decision makers in adjusting the price strategy, the partnership would likely have failed. It was not an issue of knowledge, but the ability of the cross-functional team to get personal access to people who had the power to influence the pricing decision."**

Finally, the third major justification of the use of cross-functional teams related to stability. Many of the executives pointed out that their organizational structures and work assignments of key members of the organization were quite dynamic. They argued that the use of cross-functional teams was a mechanism to create a stable organizational form. That is, while individuals might shift their organizational assignment and even their work assignment, their participation in a cross-functional team related to the strategic partnership could remain constant. One organization even described a concept of sustaining a half-life of a cross-functional team for strategic partnerships: they would not remove members from the team if by doing so it reduced the average level of tenure for the team below a critical point. The need for stability, they argued, was multifold. The team not only had to be able to build and sustain personal working relationships, necessary for effective action, but they also had to develop an organizational memory. Many of the executives pointed out that if the relationship and individuals involved in managing a partnership changed constantly, the ability to bring to bear past discussions and commitments to understand the impact of a current decision was at risk.

4.3.5 MULTILEVEL HUMAN RESOURCE STRATEGY

A key issue identified by most of the executives in the interviews related to the need to establish partnerships at multiple levels of the firm. Actions to build partnership (education, joint planning, measurement and control, and teams) should address all levels of the firm. It was interesting to note that most executives said strategic partnerships were fairly easy to form and sustain at the senior levels of the firm and at the operational level of the firm. However, the ability to effectively establish a partnership relationship among middle managers across organizations or across functions provided a more difficult challenge. They argued that a multilevel human resource strategy was required. This strategy would direct partnership-building actions across levels of the firm, as well as the selection and assignment of key personnel. For example, as described in Section 3, one firm directly addressed the issue of predisposition for a strategic partnership by establishing an executive team that had an existing trust relationship. Many of the executives, discussing issues relating to I/S-line partnerships indicated that their human resource strategy was a key element in establishing shared knowledge, organizational linkage and improved predisposition at all levels of the firm.

4.3.6 TECHNOLOGY

Finally, a key action found throughout the interviews was the use of technology necessary to build and sustain partnership relationships. Each of the executives talked about the cost of coordination necessary to make an effective partnership work. The information technology necessary to effectively execute a partnership was viewed as critical. Technology can affect all aspects of a partnership. In some cases, the existence of the information system was viewed as the primary asset which the partnership member was bringing to the organization. It provided the mechanism by which interorganizational processes were created, e.g., EDI. It was also viewed as a key element supporting joint planning processes. For example, many of the executives talked about the need to have the ability to create and circulate position statements quickly among members of the partnership. One executive suggested,

> **"We must change how long it takes us to think strategically. In order to do that, we have to have the technology that enables us to examine the competitive environment, think about it effectively, and come to some decisions. The only way I can see that working in the partnership relationship is if it's got significant information technology support."**

5. CONCLUSION

This research has provided a descriptive model of the concept of partnership. The model was developed from both an external partnership perspective and the perspective of an internal relationship between the I/S and the line organizations. The work suggests that the general model of partnership described here can be an effective means to describe and explore the I/S-line partnership.

The six determinants of partnership can be used to examine the elements required to define a management strategy for the creation of a partnership. In addition, the six categories of actions taken by firms to build and sustain partnerships can be operationalized as part of the management strategy.

Future research should focus on defining adequate measures for each determinant of partnership. A measurement model can establish those indicators that would reliably reflect the status of a partnership. Ultimately, the measures of partnership must be related to performance of the firm, through understanding the benefit stream resulting from the partnership and ways to value those benefits.

The benefits achieved through partnerships may be unanticipated. Therefore longitudinal studies of partnership should be conducted to assess the impacts of these relationships on the participating organizations.

References

Cash, James I., Jr., and Benn R. Konsynski. "IS Redraws Competitive Boundaries." *Harvard Business Review*, 63, No. 2 (1985), 134-142.

Curley, Kathleen, and John C. Henderson. "Evaluating Investments in Information Technology: A Review of Key Models with Proposed Framework for Future Research," *The ACM/OIS Proceedings on Value, Impact and Benefits of Information Technology*, Minneapolis, MN, May 1989.

Gardner, John, and Martha C. Cooper. "Elements of Strategic Partnership." In *Partnerships: A Natural Evolution in Logistics*, Results and Proceedings of the 1988 Logistics Resource Forum. Ed. Joseph E. McKeon. Cleveland, OH: Leaseway Transportation Corporation and The Ohio State University, 1988, pp. 15-31.

Henderson, John C., and N. Venkatraman. "Strategic Alignment: A Process Model for Integrating Information Technology and Business Strategies", CISR Working Paper #196, MIT Center for Information Systems Research, Cambridge, MA 02139, October 1989.

Johnston, Russell, and Paul R. Lawrence. "Beyond Vertical Integration--the Rise of Value-Adding Partnership." *Harvard Business Review*, (July-August 1988), 94-101.

Keen, Peter G. W. *Competing in Time: Using Telecommunications for Competitive Advantage.* Cambridge, MA: Ballinger Pub. Co, 1986.

Kling, Rob. "Social Analyses of Computing: Theoretical Perspecitves in Recent Empirical Research." *Computing Surveys*, 12, No. 1 (1980), 61-110.

Konsynski, Benn R. and A. Warbelow. "Cooperating to Compete." Harvard University Working Paper No. 89-02, 1989.

Markus, M. Lynne, and Jeffrey Pfeffer. "Power and the Design and Implementation of Accounting and Control Systems." *Accounting, Organizations and Society*, 8 (1983), 205-218.

Mumford, E. "Participative Systems Design: Structure and Method." *Systems, Objectives, Solutions*, 1, No. 1 (1981), 5-19.

Rockart, John F. and M. S. Scott Morton. "Implications of Changes in Information Technology for Corporate Strategy." *Interfaces*, 14, No. 1 (1984), 84-95.

Rockart, John F. and James E. Short. "IT in the 1990s: Managing Organizational Interdependence." *Sloan Management Review*, 30, No. 2 (1989), 7-17.

Wilson, Diane D. "A Process Model of Strategic Alliance Formation in Firms in the Information Technology Industry." Management in the 1990s Working Paper # 89-070, Massachusetts Institute of Technology, Cambridge, MA, March 1989.

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